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## THE MANOR-HOUSE AT MILFORD.

IN THIRTEEN CHAPTERS.—CHAPTER I.

I have a widow aunt, a dowager,  
Of great revenue, and she hath no child.

'HERE's Milford at last!' cries a young man, seating himself, panting, on the top rail of a low stile that crossed the pathway leading from out a dark fir plantation, along the side of a commanding slope.

It is the afternoon of a bright winter's day; the sun has only just disappeared in a veil of cloud and orange-bordered mist. The hills around are looming indistinctly through a soft haze; down in the valley, wreaths of light vapour are rising from the winding course of the stream. It is a wooded, fertile vale, inclosed by low, warm-looking hills, of a soft rounded form, cultivated to the very tops, and of a light arable soil, now being turned rapidly over by the plough. Here and there, along the bases of the hills, are hop-gardens, recognisable by their stacks of poles in rounded conical piles, resembling in form the regulation bell-tents of the army. Rising gently from the further margin of the river is a low gravelly slope, on which lies a snug comfortable village, of dark stone houses, intermingled with others of red brick, mellowed by age, some with roofs of red tile, others of shining blue slate. The gray tower of the church, from a corner of which rises a single pinnacle, shews over a tangled network of leafless trees. Apart from the village stands a solitary house, with farm-buildings at the side, which even at this distance wears a severe and melancholy aspect.

There have been heavy rains of late, and the river has overflowed its banks, and lies in pools here and there wide of its bed. The white mill and the miller's ivy-covered house are fairly surrounded with water, whilst the big wheel has come to a stand-still, from pure plethora of motive-power. The water has covered the road, too, in a hollow close by the bridge, and has formed a shallow lake, in which trees and hedges stand mournfully out,

washed by the ripples, that course among them with strange unaccustomed plashings.

Our pedestrian quickly descends the path, and gains the highway, but is soon brought to a stand by this impromptu lake, and halts at its margin, gazing doubtfully before him. The water looks chilly and forbidding. He must wade up to his knees to get through it, and the prospect of soaked garments and boots churning with water, is not inviting, this winter's day. His irresolution is of good service to him, for behind him sounds the rattle of wheels, and presently a light butcher's cart and smart bay horse appear, driven by a man in a blue frock.

'Will you give me a lift over?' cries the young man.

The butcher pulls up without a word, nods his head, and takes up his passenger. Then he drives cautiously through the flood, the horse pawing the water nervously. When he reaches firm ground on the slope of the bridge, he whips up his horse, who dashes off at a brisk trot.

'Whereabouts?' cries the laconic butcher, lifting up his thumb interrogatively.

'*Royal Oak*,' answers the rescued pedestrian.

The *Royal Oak* was the inn that stood by the side of the highway, where the village lane joins it. Butcher pulls up with a jerk opposite the inn, and his passenger jumps out.

'Will you have a glass of ale, butcher?' he cries.

The laconic man in blue nods his head, and they enter the inn together.

It is a raw, unfinished-looking house: in the entrance lobby is a plain deal counter forming a bar, behind which are a few shelves containing bottles, a beer-engine with two handles, some pewter measures, and a number of white earthenware mugs. A slate hangs to a nail from one of

the shelves, and pinned against the wall is a coloured print of a dog lying dead under a beer-barrel, with the inscription: 'Dog Trust is dead; bad pay killed him.' To the left is the inn parlour, a room with sanded floor, furnished with a couple of long deal tables, and a number of Windsor chairs with wooden seats. A cheerful fire is at one end of the room, on the hob of which is simmering a big saucepan. Widow Booth, the hostess of the inn, is sitting warming herself by the fire. A good-looking girl, with soft, creamy complexion, and sensible resolute face, is on the bench behind Mrs Booth, busily tatting away at some well-fingered edging. This is Lizzie Booth, orphan niece of the landlady. The silent butcher joins a little knot of men who are standing at the bar drinking; but the pedestrian passes forward into the parlour, and looks around him.

Besides Widow Booth and her niece, there is a third person in the parlour—a red-faced, red-nosed man, dressed in corduroy trousers and a white sloop, a yellow silk handkerchief round his bull-neck, a clumsy cap of rabbit-skins on his head. Between his knees is a large basket of pedlery, chiefly in the crockery-line. He is tempting Widow Booth with a mustard-pot, a bright thing in crinkly ware, with a spoon of the same. 'Supposing, ma'am,' he is saying, 'that you should happen to have a bit of cold meat for dinner, how much nicer your mustard tastes in a helegant pot like this, as'd save its cost in a month, ma'am.'

'I don't want it, thank you,' said Widow Booth resolutely. She turned a cold shoulder to the mustard-pot, and devoted herself to the contemplation of the pot that was simmering on the fire.

The pedler divined that her answer was a final one, and turned to the possible customer now entering. 'Wouldn't you buy a nice pair of vauses, to take home to your good lady, sir?' he cried, producing a pair of highly gilt and coloured jars.

The new-comer shook his head. 'She ain't come home herself yet, Mr Pedler.'—Then he cried to Mrs Booth, who still kept her eyes fixed upon the hob: 'Don't you recollect me, Mrs Booth? Don't you recollect Tom Rapley? You haven't forgot me, anyhow, Lizzie,' he went on, holding out his hand to that young lady, who gave a little scream of astonishment, and turned a pretty mother-of-pearl pink all over her face. The old lady was a little hard of hearing at times, but Lizzie shook her and shouted into her ear. The widow nodded graciously at Tom, and examined him with critical eye.

Tom has been shaking hands for a long time with Lizzie, and now he sits down on the bench beside her.

'Have you been pretty well since I left, Lizzie?'

'Pretty middling,' replied Lizzie with a soft sigh, which Tom fondly interpreted to mean, 'pining a little for you.' She looked at him softly, with a kind of dreamy admiration in her eyes. And, indeed, he is a good-looking fellow, with

a nice florid complexion, luxuriant whiskers, a mouth that is good-natured, if a little undecided in expression, and a fine long aquiline nose.

'Did I hear say as Master Tom Rapley had come home?' asked one of the group at the bar, putting his head into the parlour—an elderly man, with scanty grizzled locks, a clear-cut healthy face, and bright intelligent eyes.

'Is that you, Sailor?' cried Tom. 'Why, you look younger than ever. Come in.'

Sailor now introduced the whole of his person into the parlour. He was dressed in a pea-jacket, over a blue worsted jersey, which had a small open-work square in the breast of it. His red comforter shewed just above his jersey; his nether garments were of ordinary corduroy, tied below the knees with string. He was a cheery, hale old fellow, a good worker, and handy odd man, equally fond of a social glass and improving conversation.

'Bless you, I don't worrit myself, I don't,' he replies, in a high cheerful voice; 'so I ain't no call to get old. Well, you have grown a good-looking young chap, Master Tom! I suppose you don't recollect about the hunt we had that time you and young Dick Durden would have it you viewed the hare 'cross the six-acre fild, as turned out to be old Sally Baker's cat—ha, ha!'

The pedler, seeing no further chance of doing any business, drank his mug of ale, and swung his basket on his shoulders. 'You won't let me leave the mustard-pot then, ma'am?' Mrs Booth shook her head. 'Well, have you ne'er a rabbit-skin or two to sell, ma'am?'

'Lizzie!' cried Mrs Booth; but Lizzie was deeply engaged in talk with Tom, and the widow rose herself, and went out, bringing back with her three or four skins, which she sold to the pedler. 'Here, Liz,' she cried to her niece, putting three-halfpence into her hand—'here's your parquisite.'

'My! aunt,' cried Lizzie, rousing herself, 'you've never sold all those skins for that? Why, one of them's worth the money.'

Tom looked at her admiringly. Lizzie was evidently sharp at a bargain, and a faculty of that sort is worth as much as a small fortune to a girl, he thought.

'Well, but, miss,' remonstrated the pedler, 'what's them others good for? Shrivelly bits of things, that ain't no account. They ain't a bit of use to me, without it's to mend my old cap.'

'Well, a bargain's a bargain,' cried Lizzie; 'only, it's well you hadn't me to deal with.'

'You wouldn't have done no better, miss.'

Lizzie tossed her head, and walked away to the window, and began to look out, in an abstracted kind of way. Tom followed her, and took up his place beside her.

'Lizzie!' he said in an undertone.

'Well, Tom?'

'Ain't you got anything warmer to say to me than that?'

'It was about as warm as what you said to me.'

'Ain't you pleased to see me back again, Lizzie?'

'My! won't your aunt Betsy be proud of you!' said Lizzie, casting over him a glance that might be appreciative, or might be sarcastic.

'But, are you proud of me, Lizzie! Don't you think I'm improved?'

'Well, you're changed,' replied Lizzie evasively. 'Your whiskers are grown a good bit,' she went on, after a moment's reflection, holding her hands out before her face, as if trying to gauge their length.

'There's one thing I'm not changed in, Lizzie.'

'What's that?'

'You know, Lizzie, don't you?'

'Your nose, perhaps; it isn't any longer, I think, Tom.'

Tom was rather vexed at this: his nose, though a handsome one, hypercritical persons might object to, as over-long for strict proportion. He turned away from the window, with heightened colour. Meanwhile, Sailor settled himself for a yarn about his adventures at sea. Skim leant forward, eagerly intent on putting in his word whenever he could; his experience had been limited, but he made the most of it.

'I remember when we was roun'g Cape Horn, and the waves running mountainous high'—

'I've seen 'em worse than that,' cried Skim eagerly. 'Me and another chap was sawing down Upchurch way, and the waves ran right into the pit—drowned us out, they did.'

'Ah! that was the *tide*,' said Sailor contemptuously. 'You never saw such a sea as when we was roun'g Cape Horn.'

'Tell you the waves was right roun' me,' cried Skim. 'I says to my mate: Met, says I, I'll have a wash; and I goes down to the water, as I thought; but lor, it was nothing but lather.'

'Ah!' said the mistress, with reminiscences of Margate in her mind, 'don't they waves foment!'

'Umph!' snorted Sailor; 'you ain't none of you had no experience of the sea. If you'd a roun'ed Cape Horn, and seen the waves! There was a storm that blowed that violent as you have no idea of. It was all hands to shorten sail, and me and Jack Waters'—

'That was Jack's widow as died a year ago last spring,' cried Skim, almost in a shout, so eager was he to plunge into the stream of talk. 'Tell you I carried her things about time her sale was.'

Skim's harsh voice drowned the lighter tones of Sailor, who cut off his yarn in despair, and listened, in a resigned disappointed way, to Skim's description of Widow Waters's sale.

Lizzie had gone back to her station by the window, and Tom, drawn by a sort of irresistible attraction, had followed her.

'Then you are glad I'm come back?' he began weakly.

Lizzie nodded. Time was short, after all, and it was not well to be too coy.

'You ought to know what there is about me that isn't changed—it's my heart, Lizzie.'

She sighed softly, but made no reply.

'Do you remember,' cried Tom, 'the last time we met, over at the stile by the fir plantation, on the field-path to Biscopham?'

Tom's pretence of looking out of the window was a very shallow one. He had turned away from the prospect outside, and was ardently gazing into Lizzie's face. She was looking downwards, curiously regarding the hem of her apron. Sailor, Skim, and the mistress were sitting with their backs to the window, absorbed in their discussion; whilst stolid Butcher, who had uttered not a word, but who had absorbed more than his fair share of the ale, had fallen asleep with his head on the table, forgetful of horse and cart, and was sleeping stertorously. Nobody thought of Tom and Lizzie. It was just the same as being alone. Tom's face gradually approached Lizzie's pink cheek, which didn't seem repelled from the contact—she thus expressing what a woman's coyness inclines to decline uttering in words.

Just at that moment, a black heavy object seemed to intrude itself between them, and something rapped fiercely at the window-pane. It was the butt-end of a driving-whip; and Tom saw, in dismay, that a carriage had stopped opposite the window, and that a lady, who sat in the driver's seat, was prodding vigorously at the window with her whip-handle.

'O my!' cried Tom, with a shudder of dismay, 'here's Aunt Betsy!'

Aunt Betsy was in a four-wheeled chaise, with a male companion. It was a very old chaise, with a leathern hood over the front seat, and a little perch behind, that seemed cut off altogether from human sympathy, very brown and rusty, its iron frame protruding at all the folds of the leather-work. The horse in the shafts was a young one, with long shaggy coat, and fetlocks fringed with coarse hair.

Lizzie and Tom were a long way apart by this time, both looking very red and flurried; but Lizzie followed Tom with a reproachful glance as she saw him vanish without making his adieux, and run out to greet his aunt.

'Well, aunt, how do you do?' said Tom hurriedly. 'I got Butcher to give me a lift over the flood, and so I went in here to treat him to some ale, and I staid a few minutes, and—Hollo, it's Mr Collop. How do you do, sir?'

Tom came to a full stop; his aunt regarded him with a cold stony stare, that seemed to freeze up his powers of speech; her companion, a tall, thin elderly man, with thin pursed-up lips, hollow eyes, and prominent spade-shaped nose, threw up the whites of his eyes, and shook his head solemnly.

Aunt Betsy was a stern, rigid-looking woman, dressed in a black silk poke bonnet, a brown stuff dress, with little hard black buttons sprinkled over it. She had a thick faded Paisley shawl closely folded round her neck, and wore black kid gloves, the knuckles and finger-joints of which were stretched and swollen. She had the face of a hawk, a fierce hooked nose, and prominent cheek-bones, which shewed through the yellow parchment skin that was drawn tightly over them. Her cold gray eyes looked out from a network of minute wrinkles, and she had a way of staring steadfastly at people, as if they were almost invisible with the naked eye, and could only be recognised by a fixed attentive stare.

'Thomas,' she said, after a pause, 'have you come to see me, or have you come to see the *Royal Oak*? You can make your choice, you know.'

'O aunt, I only just'—

'Hundreds of young men have gone to destruction through only justing, Thomas. Jump up behind, and come home with me.'

Thomas crawled into the small perch behind, and settled himself—his knees almost up to his chin, his nose flattened against the leathern hood—conscious that the whole company he had just left were gazing out of the window at him—Sailor, Skim, the butcher's red face, Widow Booth with her gray locks, and last of all Lizzie, contemptuously smiling. Yes, he owned himself a craven, to desert her so readily at Aunt Betsy's nod!

Aunt Betsy's chaise passed through the village of Milford, and presently took to a narrow sandy lane, and by-and-by drew up before an ancient stone house, once the manor-house of the village, but now known simply as Milford's. The house fronted the lane with a solemn-looking gable of curved outline, built of the hard gray stone of the neighbourhood, pierced with mullioned windows; over the windows, projecting driptones, in shape like the top of a capital T. A wing projected at right angles from the south end of the gabled part, and in the corner, now in deep shadow, was the hall-door. Above this angle, rose a massive chimney-stack, adorned with handsome brick mouldings, that gave an air of dignity to the house. Behind this recessed wing was a projecting outbuilding, containing a back-kitchen, wash-house, and scullery, with a bedchamber above, a modern addition to the house; and beyond this was the garden, with numerous gooseberry-bushes, and raspberry vines, and a few rows of desolate-looking winter cabbages. From the gable-side of the house, a low wall was continued flush with the lane which formed one side of the straw-yard; behind which were stables and cowsheds, now little used, and falling out of repair. Above these peered the ancient roof of the hop-kiln, with a white cowl at the top, with a long vane standing out of it, that veered to and fro with the wind, creaking mournfully. A handsome clump of trees shewed in the background a soft and delicate screen of twig and branch.

'Jump down, and hold the horse, Thomas,' cried Aunt Betsy.

In the meantime, who is Aunt Betsy, and who is Tom Rapley?

Aunt Betsy was the elder of two sisters—daughters of a small smock-frock farmer—who had married, the one a shopkeeper, the other a farmer and maltster. The tradesman's wife gave birth to Tom Rapley. Aunt Betsy's union with Rennel, the sporting farmer and gay maltster, proved unfruitful. Mrs Rapley's marriage turned out badly; her husband drank away his character and capital, and ended his days as shopman to an old apprentice, one Collop, who employed him more out of charity, as it seemed, than that the broken-down man was of any use. He survived his wife, however, who died in the middle of their troubles. Tom, the son, had served his time with Collop, and in due course, went to a big draper's shop in London, and became the smart shopman we have just seen.

Aunt Betsy's fate was more propitious: her husband, indeed, was as little of an exemplary character as her sister's, but he had quite another sort of person to deal with; a vigorous, capable woman, fully alive to her own interests, and with a firm hand to maintain them. The reins that

fell from her husband's trembling fingers, she seized and retained. Thanks to her, her husband died in the odour of outward respectability, and left his stock plenishing and household goods intact to her careful disposal. Under her management, the business thrived and increased, till Aunt Betsy became the richest farmer and largest capitalist in all the county. Not that she made her money out of the Manor Farm; clever as Mrs Rennel was, she was not clever enough to make much money out of farming; but from her hops, which she had planted and grown successfully for many years; from her malt-houses, which she had established all over the county; and also out of Collop's shop in the High Street of Biscopham, for which she had originally found the capital. With her, money had bred money.

Collop the shopkeeper was a widower, and had made many ineffectual attempts to induce Aunt Betsy to marry him. He had an only daughter, a clever and virtuous, but extremely ugly girl. Mrs Rennel was not to be won. She had a great respect for Collop, and employed him constantly in her affairs, but she wasn't going to set him or any other man in authority over her.

One consideration, however, greatly troubled Aunt Betsy. There must come a time when she would be obliged to renounce the care and arrangement of all her affairs; she couldn't expect to live for ever. Aunt Betsy had been fighting so long for her own hand, that she had not the slightest wish to benefit any one else by her acquisitions. She loved her own possessions, the comfortable house, the good farm that she had bought and paid for with her own money. She loved her chests of linen; her wardrobes, filled with good clothes; her well-polished furniture, and fat feather-beds, but it was with a jealous exacting love, to which it was a cruel pang to realise that these objects of her affection must eventually be enjoyed by some one else. Aunt Betsy had not been a religious woman during her prosperous career; but of late years she had been much taken with the tenets of a sect, popularly known as the 'Tomorrowningites,' the leading tenet of which was, that the world was to be destroyed and renovated at a very early date, perhaps to-morrow morning. A small remnant of people—those who accepted the belief of the Morningites—were to be saved from destruction, and to become the heirs-general of humanity.

This foolish faith was in itself so pleasing to Aunt Betsy, that she accepted it with an alacrity that was a wonderful contrast to her caution in other matters. When she saw the young, the happy, and the sociable, and contrasted the bright warm lives of some people with her own sordid contracted existence, it was perhaps a solace to her to believe that this would hereafter be redressed, and that all these thoughtless happy people were destined to be cut off and destroyed, whilst she should be snatched like a brand from the burning. No awkward wrench in her life: no parting with pleasant possessions, and going out into the cold gloom of death: everything was to go on prosperously with her as of old.

Not that she was always steadfast to this fond belief. There were times when the realities of life obtruded themselves, ghastly witnesses, and would not be denied. Then she saw herself unlovely and unloved, sinking to an unregretted grave, no

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human soul caring one way or the other, except for that which she might leave behind. Then, with a pang, she thought of how others would live easy, comfortable lives on that which had cost her a life of pain and toil to acquire, and yet how to arrange matters so that her death should not benefit a single human creature, it was hard to contrive. Not that facilities were wanting: every morsel of this accumulated wealth of hers was at her disposal; lawyers were waiting to do her behests in life, judges and solemn courts held themselves in readiness to see that every jot of her bidding should be done after her death. And yet she found it difficult to determine what these behests should be.

At these times of gloom and doubt, another sort of fear possessed her. She had a great dread and terror at the thought of being buried alive. Her memory was well stored with incidents of this ghastly nature. She realised vividly and with exaggerated accessories, the horror of such a death, and yet she confided her fears to no one, and she was doubtful as to whether any directions she might leave would be faithfully carried out. Who would care when once she was gone?

She was a wary old dame, too, this Aunt Betsy, and was fully alive to the danger latent in any extraordinary testamentary dispositions that might give rise to suspicions of the testator's sanity. The world, she knew, would scoff incredulously both at her beliefs and fears, would call her a mad old woman for her pains; and that was an all-sufficient reason why she should keep everything to herself.

All this time we have left Tom Rapley standing by the head of his aunt's horse, an animal who was far from shewing any disposition to run away. Despite his grandeur of appearance, and the good opinion Tom had of himself, he couldn't keep up his dignity before his aunt and Collop. To them he was still the mere boy, the disobedient, troublesome orphan, the refractory, unprofitable apprentice.

'What have you done with your luggage, Thomas?' cried Aunt Betsy. 'Carrier going to bring it—he'll charge you sixpence for it. Why couldn't you bring it yourself? Always high and mighty, Thomas, and nothing to keep it up with. You'll never have a penny from me, Thomas. Ridiculous ape you've made of yourself.—Look at him, Collop.'

Collop looked at Tom with sour abstracted gaze. 'What's your turnover a week?' he said at last.

'At our establishment? Oh, about a thousand!' cried Tom grandly.

'Ah, a very good business that! And what does your master think about you?'

'Oh, I don't know; he's going to give me a rise this Christmas.'

'And how long holiday has he given you?'

'Oh, a week,' said Tom.

'If I were you,' said Collop, 'I should go back a few days before the time, and tell your master you were too zealous for his interests to stop away longer.'

'That would be ridiculous,' said Tom.

'Tom, you're a fool!' said his aunt. 'Take the pony round to the stables, and tie him up; and, Tom, you'd better cut some chaff for him; I don't think there's any done—and then, come in to tea. We've got a visitor'—here Aunt Betsy tried to

assume a knowing kind of smile—'somebody you used to be very fond of before you left.'

Tom couldn't think who that could be. He hadn't been fond of anybody, lately, except Lizzie Booth, and it wasn't likely that his aunt had invited her to tea. But he took the pony up the lane to the stables, and being a youth very fond of animals, he spent half an hour pleasantly in attending to the pony.

Collop and Aunt Betsy had entered the house, and were talking earnestly together. Collop had cautiously handed to Mrs Rennel a bag containing specie, at the same time earnestly warning her against keeping the same in the house. No one slept at the manor but Aunt Betsy; the female servant she kept going back at night to her own house in the village.

'Do be advised by me,' said Collop, 'and let the money remain in the bank in my name.'

'Well, there's no danger as long as Tom is here,' said Aunt Betsy.

'But when Tom goes? Do be persuaded, Mrs Rennel, now, pray.'

'I can't abide people sleeping in the house.'

'Then why don't you get some labouring man and his wife to sleep in the outbuilding? There's a door between the upper room and your kitchen chamber, but that might be easily fastened up. The man would look after your garden and pony in his leisure time, and you'd let him have the place rent-free for his pains, and then he'd be at hand; if you wanted anything, you'd only have to knock for him.'

Aunt Betsy rather liked this idea, and took Collop over the house to see how it could be arranged. As this old manor-house is the scene of the greater part of our story, it is well that you should thoroughly understand its plan and construction. The gabled wing was the oldest part of the house, and had evidently formed a portion of some much larger mansion. This contained on the ground floor Mrs Rennel's parlour, a staircase to the upper rooms, a small lobby, and a large storeroom. These latter had once been the hall of the more ancient house, and shewed here and there traces of fine oaken panelling. Two large bedrooms above still bore the names of the hall chamber and the parlour chamber. The other wing, built a century or so later, but still of a respectable antiquity, contained a fine roomy kitchen, with a noble hearth and chimney, now nearly all bricked up; a small mean modern grate, with an oven and boiler, occupying the place of a range where once huge spits had revolved and vast joints and fat capons had roasted simultaneously before a capacious sea-coal fire. In one corner was a door, that opened on a stone staircase, which led to the cellars under the ancient part of the house. At the foot of the stairs was a well, covered with a stone slab, a well reputed to be of fathomless depth—the water from which, bright, and cold, and sparkling, was drawn by a force-pump in the kitchen. Much of Aunt Betsy's celebrity for butter and cheese in former days had been due to the quality of the spring-water, and to the cool equable temperament of these cellars, which she had then used as a dairy. They were now almost empty. A few old frames of hop-bins stood in one corner, and from the roof hung some dry geranium roots, that had long been stored there, and forgotten. A small jug of milk, and a few

tea-cakes on a plate, were all the solid and liquid stores now visible.

There were two chambers above the kitchen, accessible by a back staircase, and then came the outbuilding, which will hereafter be more particularly described. There was nothing remarkable about the farm-buildings, except the barn, which was built in a very strong and massive way. Rumour said that this barn had once been the banqueting-hall of the former house, and certain carved oaken beams in the roofing seemed to countenance the idea that it had once been devoted to other uses. Rumour, too, spoke of subterranean passages from the old house to the barn, and also to the churchyard; and there was an unauthenticated story of a priest who was said to have been forgotten whilst hiding in one of these passages, and to have died a long lingering death of starvation. Such stories, however, gather about old houses as naturally as cobwebs and ivy, and none of the well-informed, respectable inhabitants of Milford put any faith in them.

When Collop and Aunt Betsy had examined the arrangement of the outbuilding and its communication with the kitchen chambers, they returned to the parlour, and continued their discussion.

'Yes, I think it would do very well,' said Aunt Betsy; 'I should feel more comfortable, I own. But there would be a difficulty in finding a man to suit me.'

'I think I know of one,' replied Collop. 'A man who lives in the village—a rough fellow, but honest, I really believe.'

'His name?' asked Aunt Betsy.

'The name he always goes by,' said Collop, shifting his eyes uneasily, 'is Skim.'

Aunt Betsy knitted her brows, and threw a searching glance at Collop, who bore it with apparent unconcern.

'Yes,' she said, 'I have heard about him. Well, Collop, if I can oblige you, as well as benefit myself, I don't know why I should not. Here comes Emily, I see, and Susan with the tea-things. I shall send Emily to call Tom.'

Tom came in presently, looking rather sulky. Emily had always been his particular aversion. It was a pity, for she was a very good girl; but she had weak eyes, a mottled, jaundiced complexion, was rather lame, and had no more figure than a hop-pocket. But Aunt Betsy was quite facetious about the two all tea-time, and rallied Tom about Emily, and Emily about Tom, till the pair could hardly look one another in the face. The idea of marrying Emily was a melancholy prospect for Tom; and yet, so strong-willed and determined was his aunt, that he feared she would eventually compel him to do it, if she had set her mind upon it.

It appeared that she had set her mind upon it, for, after Collop and his daughter had gone, Aunt Betsy thus addressed her nephew, as he was taking his candle to go to bed: 'Collop and I have been talking things over, and we have come to this conclusion: you and Emily are to be married, and your father-in-law is going to take you into the business. So no more *Royal Oaks* and barmaids! Do you hear?'

'You can't expect me to make up my mind all of a minute,' said Tom, who really hadn't the courage to fly directly in his aunt's face.

'Pooh! You haven't got a mind, Thomas; you're a fool altogether, a vanity-stricken, empty-headed

creature! Be guided by me, and you may live decently and respectably, with a quiet, affectionate wife, to keep you out of mischief. But go your *Royal Oak* ways, if you please, and steer for destitution; you'll have no help from me.'

Tom was a good deal moved by his aunt's words; he couldn't help owning that there might be prophetic wisdom in them. Perhaps, if Emily had not been so very ugly, Tom's fidelity to his Lizzie might have wavered.

But, as it was, Tom made up his mind to disregard his aunt's warnings. He had plans of his own. He had saved a little money, and a fellow-shopman of his, a speculative but not over well-principled young fellow, who possessed two hundred and fifty pounds, had proposed to him to put their capital together, and open a shop in Holborn. Tom had mapped it all out in imagination: he was to live over the shop, having first made Lizzie his wife. She was a good manager; and they were to keep house for the partner and the assistants. Tom had visions of himself as a prosperous trader, with a handsome, dashing wife at his side, driving out on jaunts into the country, or going to the play in the evenings. A prospect far superior this to the dull shop in the quiet town of Biscopham, living under the rule of his aunt and old Collop, and with Emmy tied to his side. Yes, he was determined to have his own way, but still the old woman's words stuck in his mind, and made him very uncomfortable.

Collop, who had driven over in a hired vehicle, on his way home called at a cottage in the village, and asked to see Skim. He was not at home; but Mrs Skim went to look for him, and brought him home presently, a little the worse for liquor.

'I've got you a place, Skim,' said Collop, with whom this man seemed to be familiar: 'I've got you a place with Mrs Rennel. House, rent free; and nothing to do for it except to dig in the old lady's garden every now and then, and to see where she had a fancy for hiding her papers.'

'And what shall we get for the job?' said Skim doubtfully.

'Well, you see,' said Collop, 'I allow you as much as I can afford, but—'

'What's five shillings a week to a gentleman like you!' cried Skim.

'But, consider the house, rent-free.'

'Ah! and break my back over the old lady's garden. No, no; I don't reckon that at anything. 'Taint worth talking about.'

'You shall have a half-crown extra for a time.' The pair had a good long talk together as to Skim's future proceedings, during which, Emily, who was sitting outside in the phaeton, got quite benumbed with cold.

Notwithstanding his perplexities, Tom enjoyed his holidays, and staid them out to the last. He dazzled his old friends at Biscopham by his smart neck-ties and fashionable apparel. He talked grandly of the offers he had of going into business; and sat upon the counter at Collop's shop, and chatted with the shopman with all the air of a future master. But one or two surreptitious walks with Lizzie settled the matter with Tom. His aunt coming down to breakfast on the day he left for town, found a note from him, stating that he had thought the matter over, and respectfully declined her proposals for his welfare. He informed her, also, that he had been married that

morning to Lizzie Booth, and hoped she would give them her blessing and good wishes.

Aunt Betsy took it very quietly, but she sent for a lawyer forthwith, and made her first will.

### CHARITABLE WORKS OF WOMEN.

WHATEVER may be the differences of opinion respecting 'women's rights,' and the 'learned professions' which they may follow, there can be no doubt that single women with time at their disposal, and with a fancy for doing some practical good, may advantageously employ themselves in various ways for the prevention and assuagement of human suffering. There, we think, they have a proper field of duty. We remember seeing, with much satisfaction, the devotedness of the Sisters of Charity in the great hospital at Lyons. Some were acting as nurses of the sick, some as dispensers of drugs, some as cooks, some as house-servants; all according to their respective tastes and capacities. Everything was gone about quietly. There was no parade of fashionable dress. The guiding principle was seemingly a meek sense of duty, and the duty was done.

It is not in our province to make remarks on denominational characteristics. Inquiry into the association of women on a religious basis, be it Roman Catholic or Protestant, is not our rôle. We let all do as they like. That good may be done by united effort, is unquestionable; but there is no reason why much may not be effected by individuals, as taste or fancy suggests. The world is broad enough for all. What cases we have known of daughters sacrificing youth and its gay prospects to succouring and cheering aged mothers plunged in adversity, of sisters toiling and wearing themselves out to help brothers languishing and friendless! There is truly much good in the world unostentatiously performed by women, which the world never hears about. It would be but a narrow policy to inquire into motives, or attempt to square everything off according to some sectarian canon. When the sick are attended to, the abject raised, waifs recovered, the aged and friendless soothed, let us be thankful, and ask no questions.

Latterly, there has been a stir in the direction now indicated. While many English women have, to all appearance, been thinking of lofty and fantastic coiffures, and copiously bunching dresses, or wasting existence on visionary sensationalism, a good number have evidently settled down to works of charity and mercy; each selecting some special objects of solicitude. It cannot but be known, that Maria S. Rye and Miss Lewin adopted a plan for assisting governesses to emigrate. Since commencing operations twelve years ago, they have found honourable occupations in the colonies for about a hundred and seventy governesses, who might otherwise have been pining out their lives in the home country. Encouraged in her good work, Miss Rye widened her sphere of operation, and set about gathering houseless 'gutter children,' and taking them in batches to Canada, where she had a Home prepared for them. The project was eminently successful. The children, after passing through a course of instruction and discipline, are eagerly sought for as 'helps' in respectable families, and a number of them are adopted. We learn from a little book, entitled

*Facta, non Verba* (Deeds, not Words), which describes the benevolent efforts of this and several other ladies, that Miss Rye 'has crossed the Atlantic no fewer than fifteen times, and has succeeded in finding respectable homes and occupation for twelve hundred girls.' But this is not all; she has made three voyages to Australia and New Zealand, and there procured situations for fifteen hundred female servants. Speaking of her success in providing homes for poor children in Canada, a newspaper of that colony says: 'Miss Rye's scheme goes to the root of the social misery that afflicts the poorest classes in Britain. It takes away its lost and orphan children before they grow up into an ignorant, idle, and vicious, and, therefore, dangerous class of society. It transplants them here, where they find homes, and are cared for and trained up in useful and industrious habits, becoming part and parcel of our own people.'

The next instance of what can be done by women, is that of Annie Macpherson, whose philanthropic efforts, prior to 1866, were chiefly expended among the agricultural labourers of Cambridgeshire. Then we hear of her being busy in instructing the poorer class of children in one of the meanest parts of London, where hundreds of little creatures pick up a scanty subsistence by making match-boxes; some of them, not more than four years of age, toiling to support thriftless mothers, or besotted drunken fathers. From less to more, Miss Macpherson resolved on carrying out a project similar to that of Miss Rye. Her operations, however, were chiefly confined to the emigration of orphan boys, 'street Arabs.' In May 1870, she took a hundred of these poor children to Canada, where they were absorbed in the families of respectable farmers and tradesmen. Returning to England, she crossed the Atlantic a second time; on this occasion taking a band of young girls and young widows, whom she had been invited to bring out. After making arrangements for receiving fresh batches of poor children, she again returned to England, and has since been occupied carrying off a series of detachments. To quote from the work already referred to: 'Miss Annie Macpherson has crossed the Atlantic ten times, taking with her no fewer than one thousand eight hundred of the wild street Arabs of the east end of the metropolis. These she has not only placed in respectable families in Canada, but has established an agency there, of unpaid co-operators, who watch that the boys are well taken care of, and in case they lose their situations by any accidental cause of their own or their employers', immediately find them other occupation. It will thus be seen that as many as three thousand children have been taken from the gutters and back slums of London, and placed in comfortable and respectable homes in the new country.' All honour to these women! The only fear we have is, that their efforts to relieve parents of their obligations may help to encourage improvidence, and as regards the dissolute, increase the attractions of London as a *Draw*. This was lately pointed out by us in reference to numerous public charities in London and elsewhere. Charitable efforts, whether by individuals or societies, are only commendable when they do not tend to create the miseries which they are designed to assuage. That seems to be the only safe and proper test for general guidance.



Next, we have the self-sacrifice of Mary Merryweather, who devotes herself to instructing and morally elevating the girls of a large factory at Halstead. She gets up a free evening school, reads, teaches, and with mildness tries to reclaim the disorderly. The girls were difficult to deal with, but the adult women were worse, for, like the men, they frequented the public-houses, and wasted their time and money. It was an uphill job to counteract these depravities, but she did it. 'Another attraction against which Miss Merryweather had particularly to work were the penny dances, which were, of course, accompanied with immoderate drinking and low songs, and were generally got up in public-houses. By degrees, however, she contrived to induce the women to leave them.' We have not space to narrate all the good deeds of this benevolently disposed woman. Let it suffice to say, she 'has superintended the education and training, as well as the direction, of three hundred and twenty-three nurses, each in her way as efficient as a first-class Sister of Charity.' Apart from which fact, 'the nursing of several first-class hospitals is under her management, as well as the poorer and most squalid districts of London.'

Now comes practical benevolence of a different kind. It is the devotion of Johanna Chandler to the poor persons afflicted with paralysis and epilepsy. She began by attending to the case of a carpenter, helplessly stricken with paralysis, whose wife was dying of consumption, and both in a state of poverty. There was a blessing on her efforts. From one thing to another, Miss Chandler 'established and organised a Convalescent Hospital, now doing an immense amount of good.'

Our next heroine, Elizabeth Gilbert, is of a different category. Born in the lap of luxury, she was, at four years of age, prostrated with scarlet fever, from which she recovered only with the total loss of sight. Under this heavy affliction, she was not daunted. With acute intelligence, she pursued her education, and became skilled in music, as well as in the French, German, and Italian languages. Her own infirmity led her to take a deep interest in the condition of the blind. She organised a staff to look after them, established a dépôt in London to find them work, conducted plans for their education, and now, through her various agencies, 'nearly one thousand blind people have in great part placed in their hands the means of supplying themselves by their own labour with the necessities of life.' One of the specialities of her benevolent efforts has been to provide work for poor blind persons in their own homes throughout the country. The operations of the society she has established extends over twenty counties in England. That estimable lady will have her reward.

We almost daily read of death-rate. In some towns it is much higher than in others. Bad drainage, impure air, deficient house accommodation, cold and wretchedness, are predominant causes of a high death-rate. In almost all such cases, the mortality is principally among children. Adverse circumstances in large towns kill them off rapidly. In some of the close and meaner suburbs of London, through want of warmth and attention, only one child in five reaches five years of age. A shocking account of the population this! It is the more distressing from a considera-

tion of the fact, that every benevolent attempt to succour the poor tends to aggravate their dissoluteness and improvidence, by teaching them to rely on extraneous assistance. Foundling hospitals, for example, were well meant, but they created the evil they were appointed to avert. Much the same thing, we fear, must be said of what the French call the *crèche*, a word signifying the crib or manger. There are various *crèches* in Paris. They are places where women may leave their infants to be attended to during the day, while they go out to some employment. It is a cheap and handy way for mothers getting rid of the trouble of taking care of their children. Only it is a bad and unnatural way, and society must be pronounced to be in an unwholesome state when expedients of this kind are resorted to. How far they should be encouraged, is a perplexing question. The *crèche*, as we gather from the work already quoted from, has gained a footing in London. Through the well-meant exertions of Mrs Hilton, a Quakeress lady, an establishment of this description has been set on foot in the poorest part of Ratcliff, and gives accommodation to more than a hundred infants. Will it not in some sort have mischievous consequences? That is a question to be answered.

Mary Carpenter offers a brilliant instance of feminine and well-considered benevolence. Beginning with the establishment of a reformatory school at Bristol, forty years ago, she may be said to have consecrated her life to the work of social melioration. Her labours are, perhaps, best known in connection with female education in India. She has visited that distant part of the empire three or four times, and stimulated measures for instructing native women, as a means for raising the mental culture of the whole population. Deeply imbedded prejudices were to be overcome, but her task, though difficult, has to a certain extent been successful. Reformatory and Industrial schools for boys and girls, a working-man's club and reading-rooms, are numbered in Miss Carpenter's miscellaneous undertakings. It would need a book to describe her pilgrimages, her labours, and all the practical good she has aimed at. England has reason to be proud of Mary Carpenter.

How to reclaim the intemperate in the dens of Westminster, was the self-imposed mission of Adeline Cooper. Her schemes to wean men from drink, her trouble in getting up a temperance club, her labours among a humble class of costermongers, her institution of a penny-bank, her exertions in establishing a model lodging-house, all testify to her philanthropy. Miss Cooper is now Mrs Harrison, and deserves thanks for her many and useful exertions.

The list of women actively employed on philanthropic schemes might be indefinitely extended. We can only glance at the labours of Miss Sarah Robinson, who has done immense good among the wives and families of soldiers—of Miss Weston, who has been equally energetic as regards sailors on their arrival from abroad, and creating among them habits of temperance—of Mrs Wightman, whose sphere of usefulness in the way of reclamation has been at Shrewsbury and its neighbourhood—of Mrs Meredith, whose efforts have been exerted on female ticket-of-leave convicts, and supplying them with honest occupation—of Miss



Mary Whately (daughter of the late Archbishop Whately), who having gone to Cairo for the benefit of her health, there occupied herself in instructing and Christianising poor Mohammedan children—of Miriam Harris, a Jewish lady, who has endeavoured to improve the poor children of the Hebrew community—of Miss Octavia Hill, who has addressed herself to the work of reforming the dwellings of the poor—and of a benevolent 'quiet-looking little Scotchwoman,' whose name has not transpired, but who signalises herself by waiting at an early hour in the morning at the doors of the metropolitan prisons, in order to speak to female prisoners on their liberation, and induce them to withdraw from the evil associates who are in attendance. Brave little woman! May success crown thy meritorious efforts!

After what we have said, need any one insist on the 'Rights of Women?' In the language of a popular 'Hymn' these rights are:

The RIGHT the wanderer to reclaim,  
And win the lost from paths of shame;  
The RIGHT to comfort and to bless  
The widow and the fatherless.

Are these thy RIGHTS?—then use them well,  
The holy influence none can tell;  
If these are thine—why ask for more?  
Thou hast enough to answer for!

W. C.

#### SEA-TELEGRAPHY.

It was not until the reign of Charles II. that signals were considered necessary in our navy. At this time, a series of signs of the most arbitrary character was established, which required a drawing of the whole ship for their record: they consisted for the most part of various-coloured flags, 'hung out,' as it was termed, in different parts of the ships, and they merely conveyed stereotyped instructions to the fleet.

Things remained much in this state until the close of the last century, up to which period there was no system of telegraphy over the sea. The antiquated arrangements continued; more flags were added, and displayed about the ships without any order or method, and commanding-officers were unable to communicate anything but pre-arranged orders. In 1780, however, Kempenfeldt, the gallant officer who lost his life in the *Royal George* at Spithead, brought the existing arrangements in the navy into something like system. He took the signals then used, and brought out a book with the flags down one side of the margin, and the messages printed opposite the marginal flags. As yet, however, it had never struck anybody how much simplicity and advantage would be gained by employing numbered or lettered flags, and using them in combinations; Lord Howe, in 1792, could only make one hundred and eighty-three signals to his fleet; and no single ship could make more than sixty-eight pre-arranged messages. About the year 1799, the flags were numbered for the first time. The existing flags were taken with some modifications, and numbered 1, 2, 3, 4, to 10; and with these ten flags, three hundred and ten set messages could be sent by the admiral of the fleet; but private ships could only make to him eighty. All this time, there was not the slightest preparation for, or attempt to send messages not pre-arranged.

Before shewing how we fell into a system of sending impromptu messages over the sea, we must refer to what happened on land. It was war which brought about the next advance in telegraphy. During the Revolution in France, the rapid movements of the French army turned men's minds to some method of conveying messages to and from armies at greater speed than had hitherto been possible. In 1795, M. Chappé invented his semaphore, which was used with immense effect by the Revolutionary army. That semaphore consisted of an upright beam and a cross-beam turning on a pivot. At each end of the cross-beam there were two other cross-beams on pivots; very numerous signs could be made by the revolutions of the first cross-beam, in four or five positions, in each of which positions, one or both of the second cross-beams could be made to assume four or five others. In that way, M. Chappé got an immense number of combinations, and was able to send his messages with considerable rapidity. Shortly after the principle of the semaphore became known, many men in England turned their attention to improving it, and producing new systems of telegraphy. Lord George Murray in the autumn of the same year (1795) introduced his shutter telegraph, which may thus be described: He had six shutters, each of which pivoted on a central pivot. When the flat was towards him, the observer saw the shutter; when the edge was presented, it disappeared. The signs were made by exhibiting or concealing a shutter or shutters in succession. In this way, he got sufficient communications to convey his messages by means of a written code. This shutter apparatus was soon after its invention set up between London and Portsmouth, and that was the system by which all messages were conveyed to and from the Admiralty and the outposts during the French war. It was set up from Plymouth to London in 1806, and short messages were sent in from ten to twelve minutes; while longer messages occupied twenty-eight to thirty minutes; a wonderful feat in those days, when a journey from London to Plymouth could not comfortably be performed under three days! It was relatively just as great an advance in telegraphy, as the enormous speed obtained a few years ago of sending one hundred and twenty words a minute from London to Birmingham by the electric wires.

This great advance on land naturally turned the attention of statesmen to the question of sea-telegraphy. It was a terrible thing that an admiral might have the most important message to send his fleet, and yet be unable to have it conveyed because he was confined to the set messages contained in his book.

In 1801, Admiral Sir Home Popham conceived the idea of making a dictionary, every word of which should be represented by a group of letters, which should be recorded by corresponding flags. This system was introduced into the British navy for the first time in Nelson's fleet with which he fought at Trafalgar. It is not generally known that the celebrated signal of Nelson before that fight, 'England expects every man to do his duty,' was given by this system. The injunction not only bore the moral significance then and since attached to it, but it was an experimental trial of one of the greatest advances ever made in sea-telegraphy. The two plans described—that

of numbering flags in combination, to represent set messages; and of lettered flags for messages not pre-arranged—remain to the present day: all that has been done since is in the way of amplification of detail. Whilst, however, this advance had been made by sea in daylight, the state of affairs on the ocean at night remained exactly the same as they were in Charles II.'s time. Lanterns in different numbers and forms, constituted, in 1700, in 1800, and indeed until 1860, the sole means of telegraphing over the sea at night. The plan was singularly defective, and in no degree fulfilled the wants of ships; yet many of the forms of lights used in the fleet with which James II. fought the Dutch, continue in use in the navy at the present moment. One particular signal is worthy of notice. Two lights, one over the other, was the order for the fleet to tack in Charles II.'s time. Ever since that period, whenever a fleet has been at sea, this has remained the signal for it to tack, and it is so at this moment. A great number of plans, always without success, were tried, not only by the English, but by other European nations, to bring up the condition of telegraphy by night at sea to that which it had reached by day.

It was not until 1862 that Major Bolton and Captain Colomb, unknown to each other previously, each made suggestions, one to the United States, and the other to England, to adapt to lights the method so well known to telegraphists as the dot and dash system, and to use it as a means of telegraphing by night in the army and the navy. Trials were made, and the system was found wonderfully efficient. From a station on the Isle of Wight to a steamer at sea, these two gallant gentlemen, acting in unison, succeeded in getting quite as rapid a communication, at a distance of thirty miles, as had ever previously been got at sea at two miles' distance. On one occasion, Captain Colomb, during heavy weather, from a steamer fifteen miles off shore, sent a message through a station on the Isle of Wight across to Portsmouth to the commander-in-chief, and received his answer back in thirteen minutes, entirely by the dot and dash system. Powerful lights were, of course, necessary to send this distance, and use was made of the electric-light and lime-light. We have not space to comment at any length upon the various modes of telegraphing now in existence which must be carried on by signs which are either visible or audible. Visible signs, however, are made distinct by difference in form, in colour, or the motion of the sign, and these can be used either separately or combined. Audible signs are confined to two methods of distinguishing them—namely, the motion or time, and the tone. Motion alone is used in the flashing system—of the dot and dash—sounds long and short, exactly corresponding to the long and short appearances of the light, are used to make the necessary signs. Of tone alone there is no positive rule, but the ordinary bugle-call is really an example of tone and motion combined.

The most prominent of our wants at sea are connected with war. Fleets are required to be kept together; the admiral must be able to convey his messages with promptitude, and his ships must be able to answer him. In case of a naval war, the coast of England would require to be studded with stations, to enable communication to be held with

ships approaching the shore, and passing backwards and forwards, to protect them from the enemy's cruisers, and to direct fleets to where the enemy is to be found. No arrangements at present exist for that purpose. In the mercantile marine, the question of telegraphy is daily becoming more important than it used to be, since the electric wires transmit from the shore to the owner, or the underwriter, all particulars concerning disasters, or state of crew and cargo. At present, only ordinary flags are supplied to merchant-ships, and the range of communication is very small—not more than two or three miles. To extend the range of such sea-telegraphy to ten or fifteen miles would be a most valuable advance. At the present moment, during the night, there is no method of communication between the shore stations and merchant-ships, and this is a great want, which ought to be supplied. The laying of electric cables has brought into close connection with itself the system of telegraphy at sea. When the *Great Eastern* was picking up and laying down the last two successful cables, enormous use was made of the system of flags and the flashing system, when all pre-arranged signals would have been valueless.

Now, there are two wants that have to be fulfilled in sea-telegraphy—one is, to enable a ship to signal to a great number of points at the same time; the other is, to address a single point as rapidly as possible. In electric telegraphy, the business is carried on in the stillness and quiet of an office; while, at sea, the most important messages must be sent when everything, so to speak, is topsy-turvy. No method can be successful at sea that does not recognise these conditions. Signs, to be visible, must be of great size, and, consequently, have to follow in slow succession; and therefore, to expedite the messages, we prepare codes, in which the words, sentences, reports, or orders in common use, are represented by a very much smaller number of signs than their component letters. These signs are then represented to the eye or ear, by forms, colours, or motions—by semaphoric symbols, by the shapes and colours of flags, and by the dot and dash. The growth of codes was originally natural, and had little claim to any underlying principle, such as they now possess. The few original simple signals, to advance, retreat, or perform similar movements, gradually accumulated, and required to be noted in a book. As they were added to, the book grew larger, and at last changed its character, in assuming its modern systematic development. The value of the code is due entirely to the increased speed it gives to sea-telegraphy; and if a speed in spelling equal to about thirty words a minute, were possible in general service, the use of codes would soon become obsolete. The existing codes are, first, the naval; then the international, a most useful and valuable thing, used in every merchant-ship, and adopted by nearly every European nation, so that foreign ships can communicate one with another; lastly, there is the army and navy code, for the joint use of both services. But there is one point that we are all sadly deficient in—that is, that many nations have different kinds of flags—different signs to represent the same letters or figures. If, at sea, a universal flag alphabet could be established, many difficulties would pass away.

To briefly describe the apparatuses in use in England for telegraphing over the sea, we should state, that in the royal navy we have, first, the system of coloured flags, in which the colours are red, yellow, blue, black, and white. Distinction is gained, first, by the shape of the flags themselves—some being long and taper, others triangular, and others nearly square—next, by the disposition of the light and dark colours on each flag; and lastly, to a small extent, by the differences of colour alone. These are displayed either singly, or in groups of from two to four. In all cases, the groups are read from above, downwards. These flags are supplemented by semaphores, and to a small extent in the daytime by the dot and dash of the flashing system. The most efficient instrument for this purpose is a collapsing drum, which closes towards its central hoop, and whose open state for long or short periods represents its dots and dashes, and its closed state the intervals. It was with such an instrument that most of the day-telegraphing between the *Great Eastern* and her consorts, when laying the Atlantic cable, was carried on. The raising and lowering of flags for varying periods of time—the waving through long arcs of a flag or a staff, are also efficient means of signalling.

At night, in the navy, the only method of telegraphing is the flashing system. The instrument in use is of uniform pattern throughout the service, and consists of an oil lantern, capable of displaying its light over an arc of one hundred and eighty degrees horizontally, and to a distance not exceeding six miles in clear weather. The motion of a vertical shade exposes and conceals the light, which can be displayed from any part of the gunwale. Height is not required, as the range of the light is considerably within that given by the curvature of the earth. The vertical shade can be worked either by hand, or by an instrument very much on the principle of a barrel-organ, which can be set to any required signal, and turned continuously by means of a handle.

During fog, in fleets, a limited number of signals are conveyed by means of guns fired at varying intervals, and when the distance will admit, steam-whistles and fog-horns are used to produce long and short sounds corresponding to dots and dashes. It is the happy peculiarity of the flashing system, that it adapts itself to all circumstances; and these fog-signals answer so well at short distances, that endeavours are constantly being made to extend the range of the present sounding instruments.

The mercantile marine uses coloured flags in the daytime, in a manner similar to that existing in the royal navy, but at present it has no means of telegraphing either at night or in fogs. It has not yet employed, and does not understand the simplicity and value of the flashing system—the prevailing impression being, that it is somewhat too abstruse for ordinary comprehension, instead of a system whereby any one who can read or write may become an accomplished telegraphist after two hours' instruction. At a period when the attention of the legislature is directed to the many evils which exist in the merchant service, it would be well that the deficient system of telegraphing from these ships be made the subject of inquiry, for it is believed that if efficient means were provided on board trading-vessels for communicating

with the shore a distance of six or eight miles, many accidents might be prevented, and probably many lives saved.

It is not generally comprehended that the success of a system of sea-telegraphy depends mainly on its range—that is, on the distance at which its signs are legible in the ordinary conditions of sea-service. In the mercantile marine, this is an especially marked requirement, for the chief use made of its telegraph is communication with the shore—reporting to electric telegraph stations on the coast-line. Range is obviously important here, and most important at night; for no ships can be legitimately called on to approach shoal-water for the purpose of telegraphing. In order to obtain this range, Major Bolton and Captain Colomb conjointly designed the light now known as the 'Chatham Light.' In appearance, it is similar to the ordinary oil-light, and is now used in the flag-ship of the Channel squadron, when the distance or state of the weather renders a very strong light necessary. The flashes, which are extremely brilliant, and are visible at least twelve miles, are produced by blowing finely powdered magnesium, diluted with a resinous substance, into the flame of a spirit-lamp. The apparatus is exceedingly simple and inexpensive, and the cost of an ordinary signal to a station ten or twelve miles off will not amount to more than twopence. Hence, there is no reason why such a light should not be used by the mercantile marine in telegraphing at sea. In our own estimation, however, a still more expeditious and reliable means of telegraphing from vessels can be adopted than any existing form. If every ship were provided with two lanterns, one shewing a white light, representing dots, and one red, representing dashes, on the Morse system, they could be made to revolve and transmit messages with great speed. Again, every lighthouse should be provided with the same means, and the men in attendance should be able to receive and transmit messages. An incalculable advantage would be gained by this means; every vessel in distress could communicate its wants to the shore, when within reasonable distance, and be supplied with anchors, sails, provisions, or water in a comparatively short time, whilst the ships would remain in deep water until their wants were attended to, and thus be enabled to proceed on their voyage without delay.

#### THE TASMANIAN BLUE GUM TREE.

SOME time ago (Dec. 6, 1873), we had a short article on the *Eucalyptus globulus*, or Tasmanian Blue Gum Tree, and its alleged marvellous properties as regards the drying of marshes and prevention of malarious disease. We ventured to ask for precise and trustworthy information on the subject; and the following has been sent to us by a correspondent, which we submit to our readers:

Much interest, he proceeds, has recently been excited among men of science, especially in France, concerning the Tasmanian Blue Gum Tree (*Eucalyptus globulus*), in consequence of the power which it seems to possess of preventing intermittent fever in the most swampy and malarious districts. There is a large amount of evidence to shew that it possesses this power in a high degree, so that not only is intermittent fever unknown where it naturally grows in abundance, although in situations and in



a climate where its prevalence might be expected, but places previously most subject to that afflictive malady, cease to be so when this tree is planted there. If all this is confirmed, as there is good reason to hope it will be, the Tasmanian Blue Gum Tree must be deemed one of the most valuable trees in the world, and to many countries it will prove an inestimable boon.

The Gum Trees, forming the genus *Eucalyptus* of botanists, which belongs to the great natural order *Myrtaceæ*, are almost exclusively natives of Australia and Tasmania. A few species are found farther north in the islands of the Malayan Archipelago and in the Eastern Peninsula. Although ranked in a natural order of which the Myrtle is the type, they are very unlike myrtles in their general appearance, and constitute a characteristic and most peculiar feature of Australian vegetation. Scattered over the face of the country, as the trees of Australia generally are, growing singly or in clumps, like trees in a lawn, instead of being congregated in thick forests, like the trees of most other parts of the world, they differ from other trees by a remarkable peculiarity of foliage. The leaves have not one face turned to the sun and the other to the earth, as trees and plants of all kinds generally have, but they stand with their edges upwards and downwards, so that each surface is equally presented to the sun. There are some species in which this is not the case, but they are only a few among the numerous species of the genus. The leaves of all the Gum Trees are leathery and undivided, and abound in a volatile oil, which has an aromatic and not unpleasant odour. Many of the species abound in resinous secretions, from which they receive the name of Gum Trees. Some of them attain a great size, with trunks sixteen feet in diameter. They are remarkable for their very rapid growth, and are easily felled, split, and sawn; the timber, when green, being very soft, although it becomes very hard after exposure to the air, and is then useful for many purposes, amongst which is that of ship-building. The *Iron Bark Tree* and the *Stringy Bark Tree* of Australia are among the species of this genus most important for their uses as timber trees. *Botany Bay Kino* is a resinous secretion of another species, of some value in medicine.

The Tasmanian Blue Gum Tree grows plentifully in the valleys and on the lower mountain slopes of Tasmania. It attains a height of 200 feet, and sometimes more, and a diameter of stem at the base of 11 to 22 feet. The stem is naked as a granite column, almost to the top, where it sends out branches forming a small crown, with thin foliage. The leaves are lanceolate, or ovato-lanceolate, generally twisted, and of a dark bluish-green colour, with a camphor-like odour. The timber has an aromatic odour, and is scarcely liable to rot, however long exposed to the action of water. It is therefore much used for ship-building, for piers, and for a great variety of other purposes, and is a considerable article of export from Tasmania.

Various medicinal uses have been ascribed to the leaves of this tree, a preparation of which has been represented as even more efficacious than quinine in the cure of intermittent fever. But this and other alleged medicinal properties require further investigation.

There seems, however, to be good reason for believing that this tree acts as a preventive of the

miasmata which produce fever and ague. That Tasmania is free from this malady, or nearly so, whilst in almost all other countries of similar climate it is sadly prevalent, is of itself a significant circumstance; but it could not be inferred from this alone that this particular tree is the cause of its immunity. However, a number of considerations having led to the opinion that this is probably the case, the tree has been introduced elsewhere, and the experiment tried in circumstances in which the result must be regarded as affording very conclusive evidence. Some unhealthy localities at the Cape of Good Hope were rendered perfectly salubrious, apparently through the influence of the Blue Gum Tree, within a few years after plantations of it had been made. It was then tried in Algeria, and on a pretty large scale, in different parts of the country; and places that previously had been almost uninhabitable in the fever season, became at once exempt from all such disease, even in the first year of the growth of the trees. The colonists and their families now enjoy excellent health, where the climate for several months of the year used to be absolutely pestilential. Similar results have followed the introduction of this tree in Cuba and in Mexico. Even in the south of France it has been productive of most beneficial effects. A station-house at the end of a railway viaduct in the department of Var was so unhealthy, that the officials had to be changed every year, but forty of these trees having been planted, its unhealthiness entirely ceased.

There is hope, therefore, for the Campagna di Roma that its cultivation may yet be carried on with the greatest facility and advantage, and the natural fertility of its soil turned to the utmost account. But if so, there is hope also of speedy immunity from sore distress for the inhabitants of many parts of the world, where intermittent fevers prevail at certain seasons of every year. How happy would many North American farmers be, if by planting a few hundreds of Blue Gum Trees, they could secure probable exemption from this disease for themselves and their families. The range within which this tree can be made available must, however, be limited by climate. It does not bear the winter even of the south of England, except when the season is unusually mild; and great part of North America, where intermittent fever is very prevalent every year during the summer months in all low grounds, and on the slopes adjacent to them, is subject to a severity of cold in winter which would certainly destroy every plant of this species. But in the Gulf States of North America, and to some extent northwards in the valleys of the Mississippi and other rivers, and along the coasts of Florida, Georgia, and Carolina, its introduction may probably be found in the highest degree beneficial, as also in the West Indian islands and tropical parts of America. It may, perhaps, be doubted if the climate of the west coast of Africa would not prove too warm for it, although its successful introduction in Cuba seems to prove that it is capable of enduring the heat of the tropics; and as the fevers of that region constitute the chief difficulty in the way of European colonisation there, the acquirement of the means of preventing them would open up prospects entirely new. It will probably not be long till the powers of the tree are fully tested in India, and if they are found to be as great as French naturalists



seem at present to believe, its introduction will probably hasten the cultivation of many a jungle, besides preserving the health and saving the life of many a civilian and many a soldier. One great tract in the north of India seems especially to demand its introduction, and to be in climate perfectly adapted to it—the *Teraï*—which stretches along the whole base of the Himalaya, where they slope down to the plains, a tract in many parts extremely beautiful, finely undulating, and rich both in grass and trees, but exceptionally dangerous from the miasmata which it exhales, for which science has not yet been able well to account.

The Blue Gum Tree has been supposed to exert its influence by the aromatic odour which it diffuses in the atmosphere. But there seems to be much reason for thinking that the secret of its power lies in part, at least, in the extreme rapidity of its growth, requiring an extraordinary consumption of water, so that it thoroughly drains the soil around it. A marsh near Constantia, in Algeria, was found to be completely dried in a very short time by a plantation of Gum Trees. Such is the rapidity of growth of the tree, that seedlings, raised on a hot-bed, and planted out in the open air in the south of England, have been known to attain a height of ten feet in the same year. In a warmer climate, the growth is probably still more rapid; but we know of no other instance of such rapidity of growth in the case of any valuable timber tree of the temperate parts of the world.

### COMBS.

COMBS are of prodigious antiquity. Rudely made, they are found among the earliest relics of art. A bronze comb, which has been pictured both by Sir John Lubbock in his *Prehistoric Times*, and also by M. Fiquier, was found in one of three coffins in a tumulus near Ribe, in Jutland, opened by Worsaae, the great Danish archaeologist: from other findings in the same coffin, it was plainly the property, not of a lady, but of a fighting-man of the bronze epoch. In Jutland we are close upon the footsteps of our own ancestors and of our Danish cousins and invaders. The earlier Celtic tribes seem to have buried their combs as well as their swords in the graves of their warriors. Such customs, indeed, are common to all races in one stage of their culture; his pipe and tobacco-bag were placed beside the dead American Indian, in case he should want to smoke upon his passage. The custom was prolonged, in some cases, into Christian times. When the body of the great Bishop Cuthbert was carried in the boat by his monks and clergy to the island of Lindisfarne, they deposited his ivory comb, 'pecten eburneus,' in the stone coffin beside his corpse. According to Reginald's description of St Cuthbert's comb, it was of a now unusual shape, broader than it was long.

St Cuthbert's comb was probably an episcopal one. This popular national saint of Northern England died at the end of the seventh century; but at least a century earlier in the Gallican Church the comb appears to have formed a part of the appliances used at a solemn high mass, especially if sung by a bishop. These church combs were usually of ivory; sometimes they were quite plain, sometimes elaborately carved and decorated with gems. Specimens of them are to be seen in

the sacristies and treasuries of a few of the greater churches on the continent; and the inventories of the prizes seized from our own churches at the Reformation epoch, prove that they were once as plentiful amongst us. In the treasury of the cathedral of Sens, they shew a large ivory comb inlaid with precious stones, and carved with figures of animals: on it is cut the inscription, 'Pecten St Lupi.' Lupus, the French St Loup, was the most famous of the archbishops of that important see in the Merovingian times. Amongst the relics hanging around the shrine of St Cuthbert in the end of the fourteenth century, the pilgrims saw three combs: one was said to have belonged to St Dunstan, another to Archbishop Malachi, and the third was called 'the comb of St Boysit the priest.' At the Reformation, these and all such portable treasures disappeared, to the loss of the historians of art and manners. Henry VIII. carried from the wealthy Abbey of Glastonbury, 'a combe of golde, garnished with small turquases and other coarse stones, weighing with the stones eight ounces.'

The episcopal comb was used in the church, after the following fashion. If a bishop was the celebrant at the eucharist, the deacon and sub-deacon combed his hair while he sat upon the faldstool, immediately after the putting on of the episcopal sandals. A towel was placed round the bishop's neck during the operation. The old offices contain prayers to be used by the celebrant at his successive assumption of each article of vesture; but I do not know whether any prayer during the combing of the hair is extant. The process is described in a pontifical written in the tenth century by order of an abbot of Corbey. In an *Ordo Romanus* of the end of the thirteenth century, the proper division of the labour is marked out; the deacon is to comb the right side of the bishop's head, the sub-deacon the left side: they are ordered to do their work lightly and decently ('leviter et decenter'). Perhaps some refractory clerks were inclined to use the opportunity, by punishing their spiritual father with a severe dig of the comb. From a ritual of the fourteenth century, belonging to the Cathedral Church of Viviers, it appears that the bishop's hair, at least in that diocese, was first combed by the deacon in the vestry; and then, not merely once, but three several times during the progress of the mass—after the Kyrie, after the Gloria in Excelsis, and after the Creed. No rule as to general European custom, or even national custom, can be drawn from local rituals and pontificals, as every bishop was the ordinary of ceremonies and uses for his own diocese.

The combs figured in our English manuscripts (many of which have been copied by the historians of manners) are nearly always of great bulk, and have coarse teeth. The mediæval and renaissance combs were often double—that is, in shape, though not in size, like modern small-tooth combs. In a representation of the arrival of a guest (painted in the fourteenth century), one of the welcoming attendants is pulling off his shoes, while another is combing his hair. The comb in this picture is truly immense. Our old English books of courtesies are full of references to the use of the comb. It was a part of the page's duty to comb his lord's hair: directions 'for combing your sovereign's head' are given by John Russell in his *Boke of Nurture*, also by Wynkyn de Worde in

*The Bole of Kerving.* Carving was the principal duty of the youth, and all other details of his work are included under it as a kind of general title. The duty of combing, as culture widens, begins to be treated by the writers on etiquette as a duty towards one's self, and not merely towards one's lord. Andrew Borde, in 1557, recommends the frequent use of the comb: 'Kayme your heade oft, and do so dyvirs times in the day.' William Vaughan, in his *Fifteen Directions to preserve Health*, published in 1602, prescribes combing for its intellectual benefits: it must be done 'softly and easily, with an ivory comb,' he writes, 'for nothing recreateth the memory more.' Sir John Harrington in his section on 'the dyes for every day,' of his *School of Saterne* (1624), gives the simple instruction: 'comb your head well with an ivory comb from the forehead to the back-part, drawing the comb some forty times at the least.' It would seem, from the preciseness of his advice, that English gentlemen were still a little slovenly in their own treatment of their hair; when they wished it to be properly treated, they put themselves under the hands of the barber. There is little doubt that the close-cropped hair of the Presbyterian and Independent Roundheads was more cleanly than the long hair of the cavalier with its artificial love-locks. It was a part of the extreme protest of George Fox, the founder of Quakerism, against all the fashions of the earlier Puritan sects, who were masters in England when he began his mission, to wear long hair. When he was preaching in Flintshire in 1651, he says that 'one called a lady' sent for him. 'She kept a preacher in her house. I went to her house, but found both her and her preacher very light and airy. In her lightness, she came and asked me if she should cut my hair. But I was moved to reprove her, and bid her cut down the corruptions in herself with the sword of the Spirit of God.' He learned afterwards that this lady boasted that she had gone behind him and 'cut off the curl' of his hair. At Dorchester, the constables made him take off his hat, to see if he were not shaved at the top of his head; they were sure that so fierce an opponent of the Puritan clergy must be a Jesuit. The long hair of the father of Quakerism, like that of the Frankish kings and chieftains, was necessarily often in need of the comb; and it comes out incidentally, in his journal of the year 1662, that George Fox was so careful of personal neatness as to carry a comb-case in his pocket. When he was seized by Lord Beaumont and the soldiers in Leicestershire as a suspected rebel, that nobleman 'put his hands into my pocket,' says Fox, 'and plucked out my comb-case; and then commanded one of his officers to search for letters.'

The cavalier gentry, who took the Quaker patriarch for a plotter, were great employers of the comb. The huge peruke came in with Charles II.; and a fashion arose amongst the gallants of combing their huge head-dresses in public: it is often noticed by the dramatists of the Restoration. It is one of the stage directions, in Killigrew's *Parson's Wedding*, for a group of fashionable gentlemen of the year 1663: 'They comb their heads and talk.' As ladies used the fan in their flirtations with gentlemen, so the artificial swains of the period wielded the comb in their languishing addresses to their shepherdesses. Dodsley has a long note on this custom in the eleventh volume

of his *Old Plays*, and cites a number of illustrations. In his Prologue to the second part of *Almanzor and Almahide*, written in 1670, Dryden refers to the ostentatious public use of the comb by the would-be wits in the pit of the theatre. From the Epilogue to the *Wrangling Lovers*, of 1677, it appears that this free public combing was a distinction which marked off the man of the town from the dull country cousin:

How we rejoiced to see them in our pit!  
What difference, methought, there was  
Betwixt a country gallant and a wit.  
When you did order perwig with comb,  
They only used four fingers and a thumb.

The comb has now been for so long an implement in all hands, and has become so cheap in price, that it is scarcely possible to realise the unkempt condition of our ancestors in some out-of-the-way places only a hundred years ago. In the Autobiography of Thomas Wright of Birkenshaw, written at the close of the last century, he says, that half a century earlier, in the village of Oakenshaw, about four miles from Bradford, the people were so rude that their manners became a by-word throughout the district. It was reported of them, that they kept their heads in such a shock-headed condition from Sunday to Sunday, that an iron comb was chained to a tree which stood in the middle of the village for the use of the whole parish. What have been the advances in the use and manufacture of combs since this period need not be particularised.

#### CAN WE REMEMBER ODOURS?

SOME persons say we can. Others are of opinion that we can only remember those things which have impressed the sight or the hearing. If it be said that the other senses have also their faculty of memory, or the mind the faculty of remembering whatever has forcibly impressed those senses, the objectors say: 'No; you remember the appearance, and this appearance, by what Mr Mill would have called mental chemistry, brings up the association of some kind of odour with the appearance.'

Before we can assert, or deny, the possession of a memory of smells, we must define clearly what we mean by these words. The best way, then, is for each of us to consult his own experience as to actual sensations, and to supply the dictionary-makers with materials for settling the definitions. Meanwhile the controversy has brought forth many curious illustrations from persons who accept the popular belief.

John Fearn, in his *Essay on Consciousness*, states that he never lost the memory of the smell of a baker's shop in a by-street of Bassora, nor that of a Jamaica fruit, luscious to eat, but unpleasant in odour, partaken of twenty-eight years before; nor that of kangaroo meat eaten in Australia. Another remembers both the taste and the smell of some barberries eaten by him thirty years back. A colonist at Melbourne declares that nothing will ever drive from his memory the smell of the first boiling-down establishment he visited in Australia

—an odour certainly not classed among those of a pleasant kind. All who have lived among the Chinese, or have been familiar with the localities in which the humbler classes of that nation reside, agree that the habits of the people give rise to odours equally indefinable and unwelcome; and the Melbourne colonist relates that this odour remains vividly impressed on his memory, though now far away from the scene.

A lady died when her little child was four years old. Musk had shortly before been brought into fashion by the Empress Josephine; the lady's handkerchiefs were scented with this strong perfume; and the child could not, or would not, go to sleep after her mother's death unless her head rested on one of these handkerchiefs. Long years afterwards, when the child had become an aged lady, she vividly remembered the particular musk odour of those particular handkerchiefs. Whether or not it could be explained by any act of association, to her, at any rate, it was just the same thing as a memory of a smell. An elderly man in 1871 declared that he had a distinct recollection of a smell that was impressed upon his senses in 1813. It was a little out of the common, and had on that account separated itself from other odours belonging to the same general class. Being a time of European war and of scanty crops, bread was very dear; his father, as a measure of economy, adopted the plan of sending the family bread to be baked in a friend's oven; the bread was mostly in the form of cakes, one for each child; and the smell of these hot cakes when they came home from the oven seems to have impressed itself indelibly on the memory of one member of the family—the odour all the more welcome because bread was rather scarce. Here one special smell impressed itself in connection with a special incident, and the same may be said (supposing the narrator did not deceive himself) in relation to a fox-hunter, who declared that he retained a vivid recollection of the odour of the first fox he ever bagged, even after an interval of forty-six years. It is hard to say to such a man that he did *not* remember the odour, that it was only a case of association of ideas; the onus of proof certainly seems to rest on those who doubt the assertion. A similar case is that of a traveller who once, in Algeria, witnessed the roasting of a whole sheep; he could always afterwards recall the odour of that roast as differing from any other he had experienced.

An argument of some strength is derived from the fact that we can compare two or more smells when only one is present. If, on smelling at two bottles exactly similar in appearance, we pronounce one to contain Eau-de-Cologne, and the other sal volatile, this may be said to be independent of anything that can correctly be called memory of smells; but if one bottle only be present, and if we pronounce its contents to be, not sal volatile, but Eau-de-Cologne, it is difficult to escape from the conviction that such a memory must really exist. Bandaging the eyes, and smelling at a bottle

which is not familiar to us by the feel, if we pronounce upon its contents, by what test do we judge except a memory of one or more particular odours? Those who believe that we have no memory either for tastes or smells, have to explain how a man born blind can have a memory of anything except sounds.

A gentleman who had an antipathy to cats, knew instantly by the odour that a cat had inadvertently been shut into a closet near his own room; it is difficult to conceive how he could have done this unless he had retained a memory of that particular kind of odour. Dr Carpenter says: 'During somnambulism there is great exaltation of sensibility to external impressions. We have seen unequivocal proof that the sense of smell has been exalted to an acuteness at least equal to that of the most keen-nosed ruminant or carnivorous animal.' This keenness of perception would be useless unless accompanied by a power of discriminating one smell from another; and this discrimination certainly seems to require the power of remembering former smells. Humboldt states that the Peruvian Indians can discriminate by the sense of smell between the footprints of whites, Indians, and negroes; here, again, it would seem that they must have stored up somewhere in the memory the differences between these three kinds of odours. The Arabs of the Great Desert have been known to smell firs thirty miles off; they could only have known it to be firs by remembering former impressions of a similar kind.

Interesting facts bearing on this matter have been narrated in relation to deaf persons, to blind persons, and to those unhappy creatures who are both deaf and blind. Such persons acquire a knowledge of the outer world through the organ of smell; and it is difficult to resist the conviction that memory must be at work here to assist the patient in discriminating between one odour and another. James Mitchell, one of the few known persons who have at the same time been deaf, dumb, and blind, had a remarkably acute sense of smell. Dr Kitto has said of him: 'He early shewed great acuteness of the senses of touch and smell. When a stranger arrived, his smell immediately and invariably informed him of the circumstance, and directed him to the place where the stranger was; when he proceeded to survey him by the sense of touch. In the remote part of the country where he resided, male visitors were the most frequent; and therefore the first thing he usually did was to examine whether the stranger wore top-boots. If such were the case, he immediately proceeded to the lobby, felt for and accurately examined his whip; then proceeded to the stable and handled his horse with great care, and with the utmost seeming attention. It occasionally happened that visitors arrived in a carriage; and on such occasions he never failed to go to the place where the carriage stood, and examine the whole of it with much attention. In all this he was undoubtedly guided by the smell and touch only.' Mr Wardrop spoke more decidedly of the use which Mitchell made of the olfactory sense in discriminating persons and objects: 'When a stranger approached him, he eagerly began to touch some part of his body, commonly his sleeve; and after two or three strong inspirations through his nostrils,

appeared decided in his opinion. If it happened to be unfavourable, he suddenly went to a distance with every appearance of disgust; if favourable, he shewed a disposition to become more intimate, and expressed by his countenance more or less satisfaction.'

Laura Bridgman, who was visited by the late Mr Charles Dickens during his first visit to America, was not only blind, deaf, and dumb, but was also deprived almost wholly of the sense of smell. Touch and taste were her only two media of communication with the outer world. She did not, therefore, furnish an illustration of the particular subject we are here discussing.

In 1758, a lady was attacked with small-pox of such terrible severity that she became blind, deaf, and dumb, and almost incapable of taking any kind of nourishment. Her case was described in the *Philosophical Transactions*. The knowledge of her infirmities rendered her averse to being seen by strangers, and her friends were obliged to adopt precautions to prevent this. One day a friend called upon her, went up to her chamber, and urged her to come down-stairs and sit with the rest of the family; this she probably urged through the medium of some kind of finger-alphabet; and, to induce her to comply, added that there would be no strangers present. The sufferer at length consented, and went down to the parlour; but no sooner was the door opened, than she started back, and withdrew to her chamber in much displeasure, alleging that there were strangers in the room, and that an attempt had been made to impose upon her. The fact was that strangers had entered the room while the friend had gone up-stairs, so that she had not known of their being there. When the patient was assured on this point, she became pacified. In reply to a question, she stated that she knew them to be strangers by the sense of smell.

In connection with the olfactory sense, we may mention that a lady once publicly advertised for a cure for its deprivation. She addressed the *Gentleman's Magazine* thus, in 1800: 'A constant reader would esteem it a favour if any of your medical correspondents could point out a remedy for a loss of the sense of smelling. I think it necessary to state my case as exact as possible. I am thirty-five years of age, and have always been subject to a stuffing of the nose whenever I take cold. I have for the last four or five years lost entirely the smell of flowers, which I am particularly fond of, and am in the habit of cultivating them for my amusement. Anything strong and disagreeable I can always smell, unless I have a cold. I have applied to several of the faculty, but none of them have given me satisfactory relief.' We do not find that this lady had any favourable response to her query.

A sensible attempt was made in one of our colonies, not usually deemed very deep in philosophy, to obtain for the sense of smell some such measure, standard, or data as we possess in regard to the photometric estimate of light, the prismatic estimate of colours, the thermometric and pyrometric estimate of heat, the vibratory estimate of the pitch of sounds, and other phenomena which affect the senses of sight, touch, and hearing. The Barbadoes Society of Arts, in 1786, offered gold medals for the discovery of 'a mode of distinctly ascertaining by some scale or standard (similar, analogous, or equivalent to the proportional dura-

tion of the monochord in music, or to the prismatic distinction of colours), whereby the progress, order, and enumeration of the primary tastes, or of the primary smells, may be clearly arranged in apt words, and so demonstratively discriminated and ascertained as the notes of music, or the primary prismatic colours are.' Certain it is that we do not, down to the present time, possess such guides, standards, or meters as are here indicated.

#### THE SEA - FOG.

UPON the cliff's steep edge I stand;  
The moaning sea I hear;  
But gray mists hang o'er sea and land,  
The mists that sailors fear.

The lichen'd rocks, the mosses red  
With silver drops are sown;  
Each crimson foxglove hangs its head  
Amid the old gray stone.

The fearful rock within the bay,  
Where gallant ships go down,  
Shews but a faint white line of spray,  
A glimmering mass of brown.

A broken boat, a spot of black,  
Is tossed on sullen waves,  
Their crests all dark with rifted wrack,  
The spoil of ocean caves.

Now sails my love on sea to-day;  
Heaven shield his boat from harm!  
Heaven keep him from the dangerous bay,  
Till winds and waves be calm!

Oh, would he sat beside our stove,  
Where mother turns her wheel;  
I know too soon, for you, my love,  
What wives of sailors feel.

Oh, that within the wood-fire's glow,  
He told us tales of yore,  
Of perils over long ago,  
And ventures come to shore.

His hand belike is on the helm;  
The fog has hid the foam;  
The surf that shall his boat o'erwhelm,  
He thinks the beach at home.

He sees a lamp amid the dark,  
He thinks our pane alight;  
And haply on some storm-bound bark,  
He founders in the night.

Now God be with you; He who gave  
Our constant love and troth;  
Where'er your oar may dip the wave,  
You bear the hearts of both.

Through storm and mist, God keep my love,  
That I may hear once more  
Your boat upon the shingled cove,  
Your step upon the shore.

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